KNOWLEDGE OF HIV SCREENING IN WOMEN OF CHILDBEARING AGE: 18-50

Honors Thesis

Presented in Partial Fulfillment of the Requirements

For the Degree of Bachelor of Nursing

In the College of Health and Human Services

at Salem State University

By

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Dr. Robin R Leger

Faculty Advisor

Department of Nursing

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Honors Program

Salem State University

2015

Acknowledgements

Firstly, I would like to thank those women who participated in this study. You have given me insight into a topic that I find extremely important and interesting- perhaps together we can make a change! Thank you to Al and Maureen Ruthazer for allowing me access into your business as a means to conduct my survey. Your kindness was not overlooked.

I would also like to thank my parents, brothers and cousins who have supported me throughout my journey through nursing school. Without the help of my family and close friends, I do not believe I would be in this position today. Stephanie, thank you for the help in formatting this text. Finally, to Katherine: you are the reason I do what I do.

Finally, I would like to extend my warmest thanks to Dr. Robin Leger who guided me through this project with expertise and charisma. Thank you for believing in me when I did not believe in myself and for pushing me to do my best work. You are an excellent role model.

TABLE OF CONTENTS

Abstract:

Background and Significance:

Today across the globe, children are still being born with Human Immunodeficiency Virus (HIV) contracted from their mothers. Although the Center for Disease Control and Prevention (CDC) recommends that all women be screened for HIV during each pregnancy, women are still failing to meet this goal. Research shows that women who understand the benefits of HIV screening for their developing child in utero are more likely to receive an HIV screen during pregnancy. Furthermore, research has shown that women who perceive themselves as "low-risk" are less likely to receive and HIV screen prenatally.

Methodology:

The nursing student and faculty advisor composed a survey with questions on demographics, HIV transmission knowledge and a self-evaluation tool to assess women's perception on their own knowledge of HIV transmission, screening, and benefits of screening.

Results:

Nearly 70% of women indicated of how much they themselves believed to known about HIV transmission with a range of scores from 27 to 100. Women's responses to the VAS for knowledge of benefits of prenatal treatment for the developing fetus were much more discouraging than the previous VAS scale results. For this scale, there was a mean of only 34.1 with a range of 0-93. The standard deviation among responses was 27.1, meaning there was high variability among samples. Finally, the last VAS scale asked women to rate their knowledge of the fact that HIV transmission from mother to child can be prevented over 98% with the proper treatment. Women's mean for this scale was only 44.7 with a range of 0-96 and the standard

deviation among responses was 30.8, meaning there was also high variability among responses. Education level had absolutely no correlation to women's knowledge of HIV transmission, screening, or treatment benefits during pregnancy. Of equal importance, results show that the majority of HIV transmission questions that were answered incorrectly were related to oral transmission.

Implications:

Education about HIV transmission and screening during pregnancy needs to be spread to women of all educational levels. Further research can focus on how best to educate women and how to promote prenatal HIV screening for all women during every pregnancy.

Introduction:

Human Immunodeficiency Virus (HIV) was first unveiled in the United States in 1981, presenting as a type of pneumocystis pneumonia. At this point in time, medical professionals were dumbfounded as to the disease's pathophysiology and transmission, let alone how to treat it. Human Immunodeficiency Virus had instilled fear into the minds of civilians across the globe. A positive diagnosis would render a death sentence due to lack of knowledge. During the first outbreak of the virus, it seemed to be highly transmittable through the homosexual population; this created an insurmountable prejudice toward the homosexual population. Later, it was discovered that this virus did not just limit itself to homosexual men, but to other populations as well. The population of interest is pregnant women who are infected with HIV and hold a high risk of passing it onto their developing child (AIDS.gov).

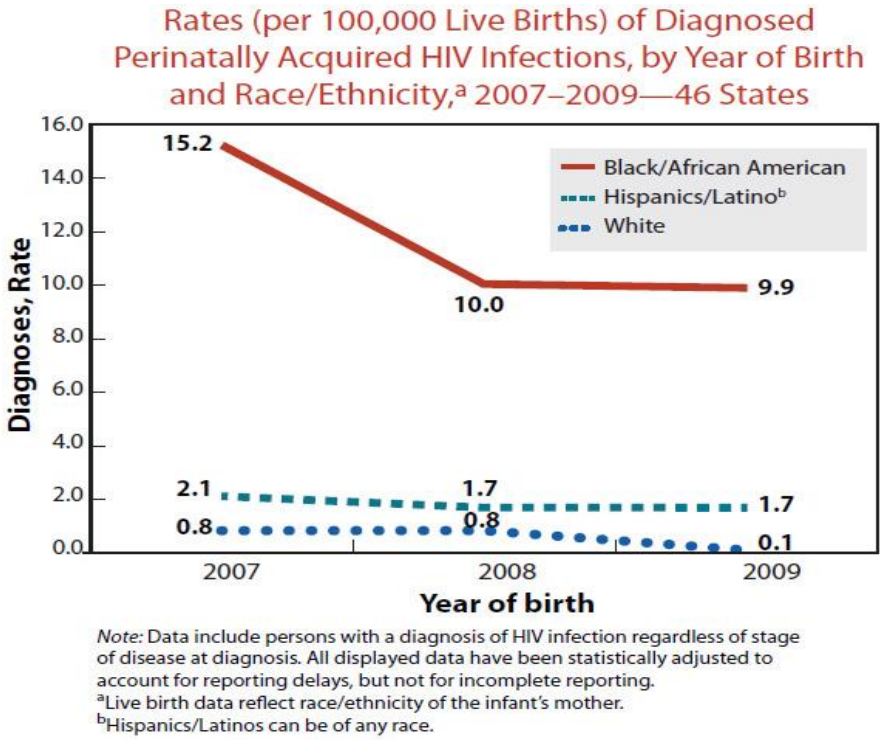
Since the United States' first introduction to HIV, much has been learned about the virus' process and how it can be transmitted and treated. The Center for Disease Control and Prevention (CDC) now lists the following ways in which HIV can be transmitted from one person to another: anal sex, vaginal sex, sharing needles, syringes, rinse water, being born to an HIV infected mother-perinatal period, labor and delivery, breastfeeding, receiving blood transfusion, tissue/organ donation, being stuck with an HIV contaminated needle, eating food pre-chewed by a person infected with HIV, oral sex, being bitten by a person with HIV, contact between broken skin wounds and mucous membranes, and deep open-mouth kissing should the person with HIV have cuts or sores in the mouth (CDC, 2015).

Sadly, a child born infected to an HIV positive mother is defenseless in the contraction of the disease. The CDC reports that there are three ways in which a child with an HIV positive mother can contract the virus. First, the fetus may be exposed to HIV in utero during fetal

development. Second, the baby is subjected to infection during the birthing process. Lastly, the infant may become infected through breastfeeding should it be born to an infected mother who breastfeeds her child. Also important to make note of is that pre-chewing food for infants, common in some cultures, is another HIV transmission risk (CDC, 2015).

Background and Significance:

The CDC recommends that all healthcare providers who manage pregnant women, screen the women for HIV as early in the prenatal period as possible. Should a woman test positive for HIV, there are treatments available that significantly decrease the risk of spreading the virus to her unborn child. The CDC explains that should a woman with HIV follow the recommended treatment plan, the chance of her child being born with HIV are less than one percent (2015). The CDC reports that in 2010, 217 children in the United States were diagnosed with HIV whom were under the age of thirteen. Of those 217 children diagnosed, 75% were perinatally infected. The following graph is the most up-to-date display of the occurrence of HIV transmission via the vertical route (mother to child).



(CDC, 2015)

Research has been done to identify and understand those women who are not getting screened for HIV during pregnancy.

Anderson, Ebrahim and Sansom (2004) surveyed women of childbearing age and identified that only about half of the women taking the survey had the correct knowledge and understanding of the interventions used to prevent transmission of HIV from mother to fetus. They concluded that more education is needed in this age group to ensure a richer understanding of the benefits of HIV screening during pregnancy and utilization of treatment when indicated. This information begs the question: Why are some women more informed on this topic than others? Moreover, one might ask: How can one identify necessary means to deliver such important information to women of childbearing age?

Likewise, in 1999, Simpson, Johnstone and Goldberg conducted a qualitative study to gather data based on women's feelings toward HIV screening during pregnancy. The results

indicated that women were interested to learn that a HIV test was available to them should they want to take it. Interestingly, this positive attitude towards the availability of the test did not correlate to the women actually following through with being screened for HIV. Many of the women in this study indicated that the test was beneficial for people who needed it, not for themselves- these women perceived themselves at being low risk for testing positive for HIV. This information would lead one to ask the question, "Are women capable of self-perceiving themselves as a low-risk category?" This would require women to know exactly how HIV is transmitted and what behaviors are considered risky for contracting HIV. Further, one may ask, What makes women go against the CDC's universal recommendation that all women be tested for HIV during pregnancy?

Interestingly, studies have shown that the more knowledge women have of the benefits of medical intervention to prevent vertical transmission of HIV, the more likely a woman who is pregnant is to be screened for HIV (Anderson, Sansom 2006). Anderson and Sansom utillized the results from the National Census of Family Growth of 2002 in attempts to uncover those who are and those who were not being screened for HIV during pregnancy. The two researchers discovered that regardless of age, race, ethnicity, educational level or socioeconomic status, women were much more likely to be screened for HIV during pregnancy if they knew of this benefit for their developing child. This would lead one to believe that a mass spread of knowledge to women of childbearing age would drastically increase the number of women being screened for HIV during every pregnancy.

Why is it that there can be a compliance rate near 100% for the "routine package" of screenings during pregnancy but not HIV? Perhaps HIV is separate because of its old stereotype

of being a death sentence? Perhaps the privacy and confidentiality laws are not accessible enough for people to be screened easily and without embarrassment or a breach in privacy?

Regardless of the reason, HIV screening is not routine. It is the purpose of this study to identify women's background knowledge on HIV transmission and screening. The research will attempt to reveal that not all women of childbearing age are being screened for HIV in each pregnancy. The study will note women's knowledge of HIV transmission in a pilot sample. Lastly, this study will attempt to unveil the knowledge women have or believe they have on the benefits of medical intervention during pregnancy should a pregnant woman be HIV positive.

Methods:

Design:

This descriptive quantitative study utilized a ten-question survey with women of childbearing age in the community setting. The focus of this ten-question tool was on age, education level, knowledge of HIV transmission, knowledge of HIV screening during pregnancy, and a Visual Analog Scale (VAS) used as a self-evaluation tool. The study was approved by the Institutional Review Board (IRB) at Salem State University. A letter of support was also attained from the CEO of a community gym as permission to have access to the facility in order to invite members to participate.

Setting:

This project took place in two different settings. The first session was done on a busy Saturday at the gym west of Boston. Here, parents bring their children for gymnastics lessons, making it a perfect place to find women within the set childbearing age. The next session was done at random in a neighborhood north of Boston. The nursing student knocked on neighborhood doors asking if the women wanted to participate in the study.

Sample:

A total of 30 women completed surveys. Before completing the survey, women were asked to review the disclosure statement that was composed to explain the study's purpose in research as well as informed consent. The education level of the sample women were from completion of high school through a completion of a masters, PhD, or higher. Surveys were completed by women ages eighteen to fifty; some had children, some wanted to have children but did not have any currently, others did not have children and did not plan to have children.

Survey Instrument:

The student developed the survey instrument based on the literature with help from the faculty advisor. The survey tool included three demographic questions, four knowledge of HIV transmission and screening questions and three Visual Analog Scale (VAS) responses. The Visual Analog Scale results were measured with one ruler by only one investigator to ensure maximum consistency among VAS responses. This scale is scored 0-100.

Data Collection:

Women who completed the survey were asked to deposit their completed survey upside down into a large envelope next to the nursing student. The nursing student did not open the envelope until she had left the premises in order to maintain confidentiality.

Data analyses were done with the help of the faculty advisor; the database was developed and data was entered into computer software SPSS Version 21 for further analysis.

Results:

This sample of participants represented a broad range of education with an equal amount of levels of education: High School graduates/Some College (n=9), Associates/Bachelor Degrees (n=11) and finally Masters/PhD or higher (n=10). The women's ages ranged from 19 to 50 with a mean of 33.8 and standard deviation 9.3. Of the women who completed the survey, 20 (66%) indicated that they currently have living children and 10 (33%) women indicated that they did not have any children. There was a total of 41 children among all of the women sampled: 7 preschool (0-5 years), 13 school age (6-12 years) and 11 adolescents (13-21 years).

Table 1. Demographics of Women of Childbearing Age

(n=30)

Age

Mean	Standard Deviation	Range
33.8	9.3	19-50

	Number	Percent
Women with Children		
Yes	20	67%
No	10	33%
Highest Education Level:		
High School	1	3.3%
Some College	8	26.7%
Associates Degree	2	6.7%
Bachelors Degree	9	30%
Masters, PhD, or Higher	10	33.3%

In regards to the HIV transmission knowledge questions, all women indicated the understanding that HIV can be contracted through the use of injection drug use. All but one woman understood that HIV cannot be transmitted via hugging. Interestingly, exactly half of women indicated that they did not know HIV can be contracted through the use of another's toothbrush (should the other be infected with HIV). All women reported knowing that vaginal sex and blood transfusions were definite ways in which to contract the virus. One woman indicated the anal intercourse could not transmit HIV. Interestingly, 13.3% of women answered incorrectly that oral intercourse could not transmit HIV. Also, 6.7% of women noted the misconception that one can not contract HIV by a tissue or organ donation.

As far as the questions regarding HIV testing and screening, 10% of women report incorrectly that there is no need for a woman to be screened for HIV during pregnancy if she is considered low-risk. Of equal interest, 30% of women indicate that there is no treatment for a developing fetus should the mother be HIV positive.

Table 2. Women of Childbearing Age and Knowledge of HIV Transmission and Screening (n=30)

	# Correct	% Correct	# Incorrect	% Incorrect
Transmission Items				
Sharing toothbrush	15	50%	15	50%
Oral intercourse	26	86.7%	4	13.3%
Tissue/organ donation	28	93.3%	2	6.7%
Hugging	29	96.7%	1	3.3%
Sharing needles	30	100%	0	0.0%
Vaginal intercourse	30	100%	0	0.0%
Anal intercourse	29	100%	1	3.0%

Blood transfusion	30	100%	0	0.0%
<u>Screening Status</u>				
No need for HIV screen during pregnancy if considered low-risk	27	90%	3	10%
There is protective prenatal treatment for baby if mother is positive for HIV	21	70%	9	30%

The Visual Analog Scales, developed for this study, revealed interesting information as to how women perceived their own knowledge of HIV transmission, screening, and prenatal treatment. Nearly 70% of women indicated of how much they themselves believed to known about HIV transmission with a range of scores from 27 to 100. Women's responses to the VAS for knowledge of benefits of prenatal treatment for the developing fetus were much more discouraging than the previous VAS scale results. For this scale, there was a mean of only 34.1 with a range of 0-93. The standard deviation among responses was 27.1, meaning there was high variability among samples. Finally, the last VAS scale asked women to rate their knowledge of the fact that HIV transmission from mother to child can be prevented over 98% with the proper treatment. Women's mean for this scale was only 44.7 with a range of 0-96 and the standard deviation among responses was 30.8, meaning there was also high variability among responses.

Table 3. Women of Childbearing Age: Visual Analog Scale- Self Evaluation Tool (n=30)

	Mean	Standard Dev	Range
Knowledge of HIV Transmission	69.6	19.4	27-100
Knowledge of treatment benefits for developing fetus	34.1	27.1	0-93
Understanding of HIV prevention in infant up to 98%	44.7	30.8	0-96

The relationship among the variables were interesting. Women who scored themselves high on the VAS for the knowledge of HIV transmission, also scored herself high for the understanding of over 98% prevention with proper medical management. The correlation is $r = .45$, $p < .01$ confidence interval. Likewise, those women who scored themselves high for self-knowledge of benefits of prenatal HIV treatment also scored themselves high for understanding the 98% HIV prevention of fetuses to HIV positive mothers, $r = .67$, $p < .01$.

Table 4. Women of Childbearing Age: Visual Analog Scale Correlations of Knowledge of HIV Transmission and Treatment

(n=30)

	VAS 1: Knowledge of HIV Transmission	VAS 2: Knowledge of benefits of HIV treatment for baby during pregnancy	VAS 3: Understanding that receiving treatment can prevent 98% of infants from receiving HIV from mother
VAS 1: Knowledge of HIV Transmission	_____	NS	.47**
VAS 2: Knowledge of benefits of HIV treatment for baby during pregnancy	NS	_____	.67**

NS= Not Statistically Significant

** $p < .01$

Discussion:

Implied Information:

From the data collected, one can interpret that the majority of women understand that injection drug use, vaginal intercourse, oral intercourse, anal intercourse, blood transfusion, and tissue donation can transmit HIV. Half of the women seemed not to know that sharing a toothbrush can transmit the virus. One may infer that if women do not know about the toothbrush route, some may not know about pre-chewing food for infants as both may seem to involve saliva contact only- rather than the exposed mucous membranes which is actually occurring. Although there was a portion of incorrect responses to the items on knowledge of transmission, one can recognize that the vast majority of women have some understanding on how HIV can be contracted.

Of much importance seems to be how women rate their own knowledge of HIV transmission and screening. As one might calculate, most women rated themselves higher on the VAS that asked about the woman's own understanding of how HIV is transmitted from one person to another. On average, women awarded themselves a midrange score for personal knowledge of HIV transmission. On the contrary, women rated themselves more poorly on the two VAS scales regarding personal knowledge of benefits of HIV treatment for the developing fetus as well as personal understanding that treatment exists to prevent 98% of infants from contracting HIV from an HIV positive mother. Another interpretation and method of sharing information is indicated when women awarded themselves two failing grades for their knowledge on treatment and benefits of treatment for the developing baby. The results of these two scales clearly demonstrate that women do not believe themselves to have an understanding of HIV treatment and its benefits to a developing fetus.

By using the ages of children given to us by each woman (should they be a mother) one was able to examine whether or not that mother had received an HIV screen during their last pregnancy (women who indicated that their last screen was more recently than their last pregnancy were assumed to have also been screened during the prenatal period of their last child). An alarming 42% of women with children did not indicate that they received an HIV screen during their last pregnancy.

Finally, in regards to education as a factor that some may believe increases a woman's knowledge of HIV transmission and screening, the last major finding may be formulated. Education level had absolutely no correlation to women's knowledge of HIV transmission, screening, or treatment benefits during pregnancy. This leads one to believe that education is needed for women of every educational class if the goal of reaching 100% compliance is to be attained. In particular is the importance of oral transmission by sharing toothbrushes, pre-chewing food (common practice to feed infants in other cultures) and oral intercourse. This is a clear target for nurses and other medical profession to aim their teaching and patient education- especially in the adolescent population, where is seems as though oral sex is more prevalent.

Limitations:

This pilot study was performed without funding, thus no thank you could be given to each woman who participated as samples. One may view the very topic of HIV to be a limitation in itself because of the stigma it sadly still may hold and women may have avoided or mis-answered personal questions on the survey.

This survey was done by paper and pen, which was much less time-efficient than a survey that could be completed online and in the comfort and privacy of one's home. Further,

the questions were designed to elicit thought and to force a woman to pick either "yes" or "no" or "true" or "false." In creating the questions without an "I don't know" option, women were able to guess the answers of which they may have been unsure, thus the results may not be an accurate reflection of complete knowledge.

If this study were to be conducted again, it would be done so with a larger sample size to reach a more accurate cross-section of society. In having more people involved, there may be more varying demographics and perhaps varying knowledge of the topic.

Future research can be done to support these findings and hopefully to support a move in a direction that enables all women to get offered and quire testing for HIV during the prenatal period. Compliance can be so high for rubella, hepatitis, syphilis, gonorrhea and chlamydia screening during pregnancy, why not HIV as well?

References:

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Appendices:

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IRB Application

Accepted via exemption on October 29, 2014.

1. Principal Investigator	
Position	Student
First Name	Alexandra
Last Name	Najjar
SSU Email Address	s0252205@salemstate.edu
SSU ID	s0252205
Phone Number	9783379799

2. Faculty Sponsor	
Name	Robin Leger
SSU Email Address	rleger@salemstate.edu
Phone Number	978-542-2613
Department	School of Nursing, School of Nursing
Status	Returned for revision on Wednesday, December 31st, 1969
Revision Return Reason	Last "No" put yes so you can attach the letter of support

3. Research Funding	
Is this research funded?	No

4. Project Title	
Title	Knowledge of HIV Screening in Women of Childbearing Age: 18-50

5. Project Start/End Date	
Start Date	10/27/2014
End Date	05/14/2015

6. Participants	
Expected Number of Participants	150

7. Participant Vulnerability	
Are any participants children or minors under the age of 18?	No

7. Participant Vulnerability	
Are any participants prisoners which are confined in a correctional or detention facility?	No
Is pregnancy required as a prerequisite for participation?	No
Are any participants cognitively/mentally disabled and/or presumed to not be legally competent?	No
Are any participants economically or educationally disadvantaged?	No
Are any participants vulnerable to coercion or undue influence?	No

8. Research Project Information	
Will your research involve the use of educational tests?	No
Will your research involve the use of survey procedures?	Yes
Will your research involve the use of interview procedures?	No
Will your research involve observation of public behavior in such a manner that human subjects cannot be identified directly?	No
Will your research be conducted in established or commonly accepted educational settings such as regular or special educational practices or research on effectiveness of or comparison among instructional techniques, curricula, or classroom methods?	No
Will your research involve the collection or study of publicly available data or documents?	No
Will your research involve the collection or study of secondary analysis recorded so that subjects cannot be identified directly?	No
Will participants be recorded on audio or video?	No
Will your research collaborate with a secordary organization such as a school or social agency?	Yes

9. Project Abstract	
Summarize the goals, purpose, and methodology of your research and hypothesis to be tested.	In this thesis, I will research the knowledge women have and perceive to have above HIV and HIV screening- specifically during pregnancy. After completing an initial literature review on the facts and statistics already studied regarding HIV and HIV screening during pregnancy, I have learned that there is a probable lack of public education in regards to the topic. I believe that my survey will identify how much knowledge women truly have about HIV and HIV screening. If it turns out they do not have as much education that they should, this study could be a jumping off point for

9. Project Abstract	
State the procedures for participants. (i.e. what they will be asked to do)	Participants will be asked to answer ten survey questions. They may chose to leave any questions blank. Before taking the survey, they will be given a disclosure form.
Provide information on research participants, including how participants are chosen and the criteria for selection or exclusion.	I will have an anonymous survey at one or more locations where there is likely to be women of ages 18-20. I will have little to no relationship with the women who take the survey. Participants will only participate if they approach the table from which I am distributing the survey. If they approach the table which is located in the multipurpose room of the Little Gym or the Ellison Campus center, they will be given the disclaimer form and survey on a clip board and may choose a seat. Seats will be distributed around the room. If the participant prefers, they may answer the survey in their car or another place in private and then give the survey back by placing it in the provided large envelope. I will only obtain the completed surveys if the participant brings it back to me and places it in the folder. I am not affiliated with the Little Gym in any way.
Provide information on how confidentiality and/or anonymity of research participants and their data will be ensured.	The survey will be completed anonymously. The participant can end the survey at any time or chose to not answer any questions that make them feel uncomfortable. At no time is HIV status requested from the participant of the survey. I will not see the results of each individual woman because they will place their own survey into a large envelope, which will not be opened until I have left the facility.
State nature and amount of potential risk involved in participation, and how risk will be minimized if necessary.	The only risk may be that the participant has emotional feelings toward the topic. If one has prolonged feelings over days please contact my faculty mentor, Dr. Leger, who will help you identify available recourses.
Describe the potential benefit to the research participant and/or society of the proposed research, and how this outweighs the risks.	The benefit of this research it to identify where education is lacking in regards to HIV and HIV screening among women.
Describe how consent will be obtained or disclosure given.	A disclosure form will be given prior to survey completion.

	Knowledge of HIV Screening in Women of Childbearing Age:18-50	Participant number:	

Please respond to the following questions base on your understanding and knowledge.

1. What is your age?
   _____ Years

2. I have children or plan to have children
   a. No
   b. Yes: Ages- ____, ____, ____, ____

3. What is your highest level of education?
   a. Middle School
   b. High School
   c. Some College
   d. Associates Degree
   e. Bachelors Degree
   f. Masters, PhD, or any higher education level

4. Human Immunodeficiency Virus (HIV) can be spread by: (*Circle "yes" OR "no"*)
   Sharing needles used for drug injection: Yes No
   Hugging: Yes No
   Borrowing another's toothbrush: Yes No
   Vaginal Intercourse: Yes No
   Anal Intercourse: Yes No
   Oral Intercourse: Yes No
   Blood transfusion: Yes No
   Tissue/Organ recipient (from donation): Yes No

5. Women at a low-risk for HIV have no real need to be screened for HIV during pregnancy.
   a. True b. False

6. I currently know my HIV status.
   a. No b. Yes, I was last tested _____ years ago

7. If I am pregnant and positive for HIV, there is treatment I can receive during pregnancy to prevent my baby from being born with HIV.
   a. True b. False

Knowledge of HIV Screening in Women of Childbearing Age: 18 - 50	Participant number:	
VAS: Visual Analog Scale		

Self Evaluation: **Please Rate with an "X" on the line**

8. Your knowledge of HIV transmission (how HIV is spread from one person to another).

None — Very Knowledgeable

9. Your knowledge of the benefits of HIV treatment for your baby during pregnancy.

None — Very Knowledgeable

10. Your understanding that receiving treatment for HIV during pregnancy can prevent 98% of infants from receiving HIV from their mother.

None — Very Knowledgeabl

Salem State University
Institutional Review Board (IRB)
Disclosure Statement

My name is Alexandra Najjar. This survey is intended for my Honor's Nursing Thesis project, as required by every honor's senior in order to graduate with the "honors" title. In the survey I will ask brief questions about you and your knowledge of HIV, HIV screening, and how it corresponds to pregnancy.

Participating in the survey research is completely voluntary. You may stop the survey at any time. All answers will remain completely anonymous. You do not have to answer any questions that make you feel uncomfortable. The only demographics you will be asked for is your age and whether or not you have children or plan to have children. Please do not put your name on the paper.

The only risk associated with this survey is raised emotions about a personal diagnosis of HIV. If you have prolonged emotional feelings over days, please contact my faculty mentor, Dr. Leger, who will help you identify available recourses.

If you have any questions about this research, you can contact my mentor, Robin Leger, RN,MS,PhD at rleger@salemstate.edu or myself, Alexandra Najjar at a_najjar@salemstate.edu .

The information provided to the researchers will be kept confidential with the exception of information, which must be reported under Massachusetts and Federal Law including cases of child or elder abuse.

This research project has been approved by the Institutional Review Board at Salem State University. Thank you for your help.

For concerns abut your treatment as a research participant, please contact:

Institutional Review Board (IRB)
Sponsored Programs and Research Administration
Salem State University
352 Lafayette Street
Salem, MA 01970
(978) 542-7556 or (978) 542- 7177 or irb@salemstate.edu

This research project has been reviewed by the Institutional Review board at Salem State University in accordance with US Department of Health and Human Services Office of Research Protections 45 CFR part 46 and does not constitute approval by the host institution.

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Alexandra Najjar
Thesis Study
Letter of Support

I, ALAN J RUTNAZER, give permission for Alexandra Najjar to conduct a survey at *The Little Gym* facility from *October 2014 to January 2015*. I understand that at any time I may ask Alexandra to leave without reason. I understand that her survey is anonymous and asking only for female participants of age 18 to 50 years.

I understand that I may approach Alexandra or her thesis advisor, Robin Leger, RN, MSN, PhD, with any further questions or concerns.

I understand that this facility nor I will not be compensated for allowing surveying.

ALAN J RUTNAZER Treasurer/COO Jasmine Inc & Jamwin Inc
Please Print Name and Title

Treasurer 10/7/14
Signature and Date